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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,731	09/19/2005	Kazuo Sato	Q85583	9380

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EXAMINER

IP, SHIK LUEN PAUL

ART UNIT	PAPER NUMBER
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2837

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/520,731	Applicant(s) SATO ET AL.	
	Examiner Paul Ip	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/11/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 1/11/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

3. The disclosure is objected to because of the following informalities:

It is not understood how the vibration is detected by the vibration detecting member while the control system stops. Appropriate correction is required.

4. Claims 1-9 are objected to under 37 CFR 1.75 because of the following informalities: It is not understood how the vibration is detected by the vibration detecting member while the control system stops as set forth in the specification.

Claims 6-8 are objected to under 37 CFR 1.75 because the claims are drafted in terms of a servo control device with embedded method steps. It is not clear whether claims 6-8 are apparatus claims or method claims. The claims fail to comply with the U.S. standard as required by rule 37 CFR 1.75.

In claim 9, the recitation of "implementing tuning in such a manner" is not clear. The claim fails to define what "a manner" is meant in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-5 and 9 are rejected under 35 U.S.C. 102(a)(e) as being anticipated by Kozaki (2003/0029240 or 6,742,391 with the Foreign Application Priority Data 2001-245152 filed in Japan on August 13, 2001).

So far the claims are understood, Kozaki (6,742,391) discloses:

column 2 lines 21 – 27 increasing a speed loop gain to detect vibration;

column 2 lines 31 – 34 and 48-56, adjusting including decreasing the speed loop gain to detect the gain when the vibration level such as a maximum/minimum value at the plurality of position; and
column 3 lines 24-31 to reduce or decrease or lower the value of the speed loop gain at the maximum level to control the NC machine tool.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kozaki (2003/0029240 or 6,742,391 with the Foreign Application Priority Data 2001-245152 filed in Japan on August 13, 2001) in view of Matsubara et al (5,598,077). Claims 6-8 include an observer for determining the simulated torque disturbance while increasing the controlled gain. However, the patent to Matsubara et al discloses a control apparatus and a control method for a servomotor comprising a disturbance

torque estimator 5 for determining the disturbance torque of the motor for adjusting the speed gain of the system. Prima facie case is made that Kozaki discloses a method and an apparatus for controlling vibration of the motor by adjusting the speed gain of the system. In considering the vibration or disturbance torque of the motor, one of ordinary skill in the art would logically consider the vibration and the disturbance torque in the same field area to seeking for a solution to better handle the vibration or disturbance torque of the motor. Having Matsubara et al in front of Kozaki, one of ordinary skill in the art would appreciate the disturbance torques estimator in terms of better control the vibration of the motor system. It would have been obvious to one of ordinary skill in the art to provide or modify Kozaki with the disturbance torque estimator as taught or suggested by Matsubara et al for controlling the torque disturbance as recited in the claims.

Citation of Pertinent References

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patents to Seki et al (4,864,209), Miyazaki (7,068,923), Kerner (6,912,426), and Tazawa et al (6,844,693) disclose speed loop gain motor control systems.

Communication Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Ip whose telephone number is (571)-272-1941.

The examiner can normally be reached on Monday to Friday from 6:30 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan, can be reached on 571-272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Internet correspondence **MUST** be provided with a prior written authorization by applicant in the application file record giving the Office authorization to communicate with applicant via e-mail. Without a written authorization by applicant in place, the USPTO will not respond via Internet e-mail to any Internet correspondence which contains information subject to the confidentiality requirement as set forth in 35 U.S.C. 122.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Ip
Primary Examiner
Art Unit 2837

8/29/2006